

COMMITTEE AMENDMENT

[STAFF WORKING DRAFT]

June 24, 2003

Purpose: To provide a substitute for the bill as introduced

**IN THE COMMITTEE ON COMMERCE, SCIENCE, AND
TRANSPORTATION**—108TH Cong., 1ST Sess.

S. 1218, 108TH Congress, 1ST Session

JUNE 26, 2003

INTENDED to be proposed by Mr. HOLLINGS

Viz: Strike out all after the enacting clause and insert the following:

1 **SECTION 1. SHORT TITLE.**

2 This Act may be cited as the “Oceans and Human
3 Health Act”.

4 **SEC. 2. FINDINGS AND PURPOSES.**

5 (a) FINDINGS.—The Congress makes the following
6 findings:

7 (1) The rich biodiversity of marine organisms
8 provides society with an essential biomedical re-
9 source, a promising source of novel compounds with
10 therapeutic potential, and a potentially important
11 contribution to the national economy.

12 (2) The diversity of ocean life and research on
13 the health of marine organisms, including marine

1 mammals and other sentinel species, helps scientists
2 in their efforts to investigate and understand human
3 physiology and biochemical processes, as well as pro-
4 viding a means for monitoring the health of marine
5 ecosystems.

6 (3) The oceans drive climate and weather fac-
7 tors causing severe weather events and shifts in tem-
8 perature and rainfall patterns that affect the density
9 and distribution of disease-causing organisms and
10 the ability of public health systems to address them.

11 (4) The oceans act as a route of exposure for
12 human disease and illnesses through ingestion of
13 contaminated seafood and direct contact with sea-
14 water containing toxins and disease-causing orga-
15 nisms.

16 (5) During the past two decades, the incidence
17 of harmful blooms of algae and hypoxia has in-
18 creased in United States coastal waters, including
19 the Great Lakes, and around the world, contami-
20 nating shellfish, causing widespread fish kills,
21 threatening marine environmental quality and result-
22 ing in substantial economic losses to coastal commu-
23 nities.

24 (6) Existing Federal programs and resources
25 support research in a number of these areas, but

1 gaps in funding, coordination, and outreach have im-
2 peded national progress in addressing ocean health
3 issues.

4 (7) National investment in a coordinated pro-
5 gram of research and monitoring would improve un-
6 derstanding of marine ecosystems, allow prediction
7 and prevention of marine public health problems and
8 assist in realizing the potential of the oceans to con-
9 tribute to the development of effective new treat-
10 ments of human diseases and a greater under-
11 standing of human biology.

12 (b) PURPOSES.—The purposes of this Act are to pro-
13 vide for—

14 (1) Presidential support and coordination of
15 interagency ocean science programs; and

16 (2) development and coordination of a com-
17 prehensive and integrated United States ocean,
18 coastal, and Great Lakes research and monitoring
19 program that will assist this Nation and the world
20 to understand, use and respond to the role of the
21 oceans in human health.

22 **SEC. 3. INTERAGENCY OCEANS AND HUMAN HEALTH RE-**
23 **SEARCH PROGRAM.**

24 (a) ESTABLISHMENT OF COMMITTEE.—

1 (1) The President, through the National
2 Science and Technology Council, shall coordinate
3 and support a national research program to improve
4 understanding of the role of the oceans in human
5 health. In planning the program, the Council shall
6 establish or designate a Committee on Oceans and
7 Human Health that shall consist of representatives
8 from those agencies with programs or missions that
9 could contribute to or benefit from the program. The
10 Committee shall consist of at least one representa-
11 tive from—

12 (A) the National Oceanic and Atmospheric
13 Administration;

14 (B) the National Science Foundation;

15 (C) the National Institute of Environ-
16 mental Health Sciences and other institutes
17 within the National Institutes of Health;

18 (D) the Centers for Disease Control;

19 (E) the Environmental Protection Agency;

20 (F) the Food and Drug Administration;

21 (G) the Department of Defense;

22 (H) the Department of Homeland Secu-
23 rity; and

24 (I) such other agencies and departments as
25 the Council deems appropriate.

1 (2) The members of the Committee biennially
2 shall select one of its members to serve as Chair.
3 The Chair shall be knowledgeable and experienced
4 with regard to the administration of scientific re-
5 search programs, and shall be a representative of an
6 agency that contributes, in terms of scientific re-
7 search capability and budget, to the interagency pro-
8 gram.

9 (b) IMPLEMENTATION PLAN.—Within 1 year after
10 the date of enactment of this Act, the Chair of the Na-
11 tional Science and Technology Council, through the Com-
12 mittee on the Oceans and Human Health, shall develop
13 and submit to the Congress a plan for coordinated Federal
14 activities under the program. Nothing in this subsection
15 is intended to duplicate or supersede the activities of the
16 Inter-Agency Task Force on Harmful Algal Blooms and
17 Hypoxia established under section 603 of the Harmful
18 Algal Bloom and Hypoxia Research and Control Act of
19 1998 (16 U.S.C. 1451 note). In developing the plan, the
20 Committee will consult with the Inter-Agency Task Force
21 on Harmful Algal Blooms and Hypoxia. Such plan will
22 build on and complement the ongoing activities of the Na-
23 tional Oceanic and Atmospheric Administration, the Na-
24 tional Science Foundation, the National Institute of Envi-

1 ronmental Health Sciences, and other departments and
2 agencies and shall—

3 (1) establish, for the 10-year period beginning
4 in the year it is submitted, the goals and priorities
5 for Federal research which most effectively advance
6 scientific understanding of the connections between
7 the oceans and human health, provide usable infor-
8 mation for the prediction and prevention of marine-
9 related public health problems and use the biological
10 potential of the oceans for development of new treat-
11 ments of human diseases and a greater under-
12 standing of human biology;

13 (2) describe specific activities required to
14 achieve such goals and priorities, including establish-
15 ment of national centers of excellence, the funding
16 of competitive research grants, ocean and coastal ob-
17 servations, training and support for scientists, and
18 participation in international research efforts;

19 (3) identify and address, as appropriate, rel-
20 evant programs and activities of the Federal agen-
21 cies and departments that would contribute to the
22 program;

23 (4) consider and use, as appropriate, reports
24 and studies conducted by Federal agencies and de-
25 partments, the National Research Council, the

1 Ocean Research Advisory Panel, the Commission on
2 Ocean Policy and other expert scientific bodies;

3 (5) make recommendations for the coordination
4 of program activities with ocean and human health-
5 related activities of other national and international
6 organizations; and

7 (6) estimate Federal funding for research ac-
8 tivities to be conducted under the program.

9 (c) PROGRAM SCOPE.—The program shall include the
10 following activities related to the role of oceans in human
11 health:

12 (1) Interdisciplinary research among the ocean
13 and medical sciences, and coordinated research and
14 activities to improve understanding of processes
15 within the ocean that may affect human health and
16 to explore the potential contribution of marine orga-
17 nisms to medicine and research, including—

18 (A) vector- and water-borne diseases of hu-
19 mans and marine organisms, including marine
20 mammals and fish;

21 (B) harmful algal blooms and hypoxia;

22 (C) marine-derived pharmaceuticals;

23 (D) marine organisms as models for bio-
24 medical research and as indicators of marine
25 environmental health;

1 (E) marine environmental microbiology;

2 (F) bioaccumulative and endocrine-dis-
3 rupting chemical contaminants; and

4 (G) predictive models based on indicators
5 of marine environmental health or public health
6 threats.

7 (2) Coordination with the National Ocean Re-
8 search Leadership Council (10 U.S.C. 7902(a)) to
9 ensure that any integrated ocean and coastal observ-
10 ing system provides information necessary to mon-
11 itor, predict and reduce marine public health prob-
12 lems including—

13 (A) baseline observations of physical ocean
14 properties to monitor climate variation;

15 (B) measurement of oceanic and atmos-
16 pheric variables to improve prediction of severe
17 weather events;

18 (C) compilation of global health statistics
19 for analysis of the effects of oceanic events on
20 human health;

21 (D) documentation of harmful algal blooms
22 and hypoxia; and

23 (E) development and implementation of
24 sensors to measure biological processes, acquire
25 health-related data on biological populations

1 and detect contaminants in marine waters and
2 seafood.

3 (3) Development through partnerships among
4 Federal agencies, States, or academic institutions of
5 new technologies and approaches for detecting and
6 reducing hazards to human health from ocean
7 sources and to strengthen understanding of the
8 value of marine biodiversity to biomedicine,
9 including—

10 (A) genomics and proteomics to develop
11 genetic and immunological detection approaches
12 and predictive tools and to discover new bio-
13 medical resources;

14 (B) biomaterials and bioengineering;

15 (C) in situ and remote sensors to detect
16 and quantify contaminants in marine waters
17 and organisms and to identify new genetic re-
18 sources;

19 (D) techniques for supplying marine re-
20 sources, including chemical synthesis, culturing
21 and aquaculturing marine organisms, new fer-
22 mentation methods and recombinant tech-
23 niques; and

24 (E) adaptation of equipment and tech-
25 nologies from human health fields.

1 (4) Support for scholars, trainees and education
2 opportunities that encourage an interdisciplinary
3 and international approach to exploring the diversity
4 of life in the oceans.

5 **SEC. 4. NATIONAL OCEANIC AND ATMOSPHERIC ADMINIS-**
6 **TRATION OCEANS AND HUMAN HEALTH INI-**
7 **TIATIVE.**

8 (a) ESTABLISHMENT.—As part of the interagency
9 program planned and coordinated under section 3, the
10 Secretary of Commerce shall establish an Oceans and
11 Human Health Initiative to coordinate and implement re-
12 search and activities of the National Oceanic and Atmos-
13 pheric Administration related to the role of the oceans in
14 human health. In carrying out this section, the Secretary
15 shall consult with other Federal agencies conducting inte-
16 grated oceans and human health research and research in
17 related areas, including the Centers for Disease Control,
18 the National Science Foundation, and the National Insti-
19 tute of Environmental Health Sciences. The Oceans and
20 Human Health Initiative shall provide support for—

- 21 (1) program and research coordination;
22 (2) an advisory panel;
23 (3) one or more National Oceanic and Atmos-
24 pheric Administration national centers of excellence;
25 (4) research grants; and

1 (5) distinguished scholars and traineeships.

2 (b) ADVISORY PANEL.—The Secretary shall establish
3 an oceans and human health advisory panel to assist in
4 the development and implementation of the Oceans and
5 Human Health Initiative. Membership of the advisory
6 group shall provide for balanced representation of individ-
7 uals with multi-disciplinary expertise in the marine and
8 biomedical sciences. The Federal Advisory Committee Act
9 (5 U.S.C. App.) shall not apply to the oceans and human
10 health advisory panel.

11 (c) NATIONAL CENTERS.—

12 (1) The Secretary shall identify and provide fi-
13 nancial support through a competitive process to de-
14 velop, within the National Oceanic and Atmospheric
15 Administration, for one or more centers of excellence
16 that strengthen the capabilities of the Administra-
17 tion to carry out programs and activities related to
18 the oceans' role in human health. Such centers shall
19 complement and be in addition to the centers estab-
20 lished by the National Science Foundation and the
21 National Institute of Environmental Health
22 Sciences.

23 (2) The centers shall focus on areas related to
24 agency missions, including use of marine organisms
25 as indicators for marine environmental health, ocean

1 pollutants, marine toxins and pathogens, harmful
2 algal blooms, hypoxia, seafood testing, drug dis-
3 covery, and biology and pathobiology of marine
4 mammals, and on disciplines including marine
5 genomics, marine environmental microbiology, eco-
6 logical chemistry and conservation medicine.

7 (3) In selecting centers for funding, the Sec-
8 retary will consider the need for geographic rep-
9 resentation and give priority to proposals with
10 strong interdisciplinary scientific merit that encour-
11 age educational opportunities and provide for effec-
12 tive partnerships among the Administration, other
13 Federal entities, State, academic, medical, and in-
14 dustry participants.

15 (d) RESEARCH GRANTS.—

16 (1) The Secretary is authorized to provide
17 grants of financial assistance for critical research
18 and projects that explore the relationship between
19 the oceans and human health and that complement
20 or strengthen Administration programs and activi-
21 ties related to the ocean's role in human health. The
22 Secretary shall consult with the oceans and human
23 health advisory panel established under subsection
24 (b) and the National Sea Grant College Program
25 and may work cooperatively with other agencies par-

1 participating in the interagency program under section
2 3 to establish joint criteria for such research and
3 projects.

4 (2) Grants under this subsection shall be
5 awarded through a peer-review process that may be
6 conducted jointly with other agencies participating
7 in the interagency program established in section 3
8 or under the National Oceanographic Partnership
9 Program under section 7901 of title 10, United
10 States Code.

11 (e) DISTINGUISHED SCHOLARS AND
12 TRAINEESHIPS.—

13 (1) The Secretary shall designate and provide
14 financial assistance to support distinguished scholars
15 from academic institutions, industry or State gov-
16 ernments for collaborative work with scientists and
17 facilities of the Administration.

18 (2) In consultation with the Directors of the
19 National Institutes of Health and the National
20 Science Foundation, the Secretary of Commerce may
21 establish a program to provide training and experi-
22 ence to scientists at the beginning of their careers
23 who are interested in the role of the oceans in
24 human health.

1 **SEC. 5. PUBLIC INFORMATION AND OUTREACH.**

2 (a) ESTABLISHMENT.—The Secretary of Commerce,
3 in consultation with the Centers for Disease Control, the
4 Food and Drug Administration, the Environmental Pro-
5 tection Agency and the States, shall design and implement
6 a national public information and outreach program on
7 potential ocean-related human health risks, including
8 health hazards associated with the human consumption of
9 seafood. Under such program, the Secretary shall—

10 (1) collect and analyze information on ocean-re-
11 lated health hazards and illnesses, including infor-
12 mation on the number of individuals affected, causes
13 and geographic location of the hazard or illness;

14 (2) disseminate the results of the analysis to
15 any appropriate Federal or State agency, the public,
16 involved industries, and other interested persons;

17 (3) provide advice regarding precautions that
18 may be taken to safeguard against the hazard or ill-
19 ness; and

20 (4) assess and make recommendations for ob-
21 serving systems to support the program.

22 (b) SEAFOOD SAFETY.—To address health hazards
23 associated with human consumption of seafood, the Sec-
24 retary, in consultation with the Centers for Disease Con-
25 trol, the Food and Drug Administration, the Environ-
26 mental Protection Agency and the States, shall perform

1 a coordinated assessment of risks and benefits associated
2 with seafood handling and consumption.

3 **SEC. 6. AUTHORIZATION OF APPROPRIATIONS.**

4 (a) NOAA OCEANS AND HUMAN HEALTH INITIA-
5 TIVE.—There are authorized to be appropriated to the
6 Secretary of Commerce to carry out the NOAA Oceans
7 and Human Health Initiative established under section 4,
8 \$10,000,000 for fiscal year 2004, \$12,000,000 for fiscal
9 year 2005, \$15,000,000 for fiscal year 2006, and
10 \$20,000,000 for each of fiscal years 2007 and 2008.

11 (b) PUBLIC INFORMATION.—There are authorized to
12 be appropriated to the Secretary to carry out the public
13 information and outreach program established under sec-
14 tion 5, \$3,000,000 for each of fiscal years 2004 through
15 2007.

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